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# Residential real estate analysis in Serbia

# Анализа тржишта стамбених непокретности у Србији

"No other macroeconomic segment has been more closely linked to financial stability than residential real estate.'

European Central Bank, Financial Stability Review, November 2016

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Abstract: The analysis of Serbia's residential real estate market is the main goal of this paper. Price movements in that part of the market affect price and financial stability equally, which are thus the main goals of most central banks. Prior to the highly contagious COVID-19 pandemic, there was a gradual increase in the number of transactions involving real estate and prices, with oscillations observed throughout the second quarter of 2020. In this paper, we will present the available databases from the Serbian residential real estate market, as well as regulations that have been in place since the 2000s. By analyzing the trajectory in the long run of the housing credit share to GDP by using a Hodrick-Prescott one-sided filter with the parameter set to 400,000 and correlation and regression analysis, the paper's concluding part will determine whether there is a price bubble in this market segment. According to the analysis, there is currently no price bubble in Serbia's residential real estate market.

**Keywords:** residential real estate, housing loan, financial stability, legal framework, price bubble JEL classification: L85, R31, R38

Сажетак: Циљ овог рада је анализа тржишта стамбених некретнина у Србији. Кретања цена на том делу тржишта подједнако утичу на ценовну и на финансијску стабилност, што су и главни циљеви већине централних банака. У претходном периоду забележено је постепено повећање броја прометованих некретнина, као и раст цена некретнина, уз осцилације које су забележене током другог квартала 2020. године услед пандемије вируса Covid-19. У овом раду представићемо доступне базе података са тржишта стамбених некретнина у Србији, као и прописе који су на снази од 2000-их. Анализом одступања дугорочног тренда стамбених кредита у бруто домаћем производу применом филтера Hodrick-Prescott са параметром постављеним на 400.000, корелационом и регресионом анализом, завршни део рада ће утврдити да ли постоји балон цена у овом сегменту тржишта. Анализа је показала да тренутно не постоји ценовни балон на тржишту стамбених непокретности у Србији.

Кључне речи: тржиште стамбених непокретности, стамбени кредити, финансијска стабилност, правни оквир, ценовни балон

ЈЕЛ класификација: L85, R31, R38

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The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the Economists Association of Belgrade.

# Introduction

As changes in the market for real estate can have a significant influence on both the financial and real sectors, inadequately secured mortgage loans were among the main reasons for the worldwide crisis of 2007-2008. To alleviate the effects of the crisis, central banks implemented a variety of unconventional monetary policy measures at the time (Martin, 2019). The significance of the residential real estate sector for financial stability stems from its significant role in the economy, as the majority of household assets are invested in residential real estate, and the financial sector plays a primary role in financing real estate investments (Duca et al., 2019). The investment's primary capability is to contribute to several manufacturing cycles (Petković, Krstić & Rađenović, 2021).

This paper's purpose is to present the Serbian residential real estate market. In this paper, we will present the regulatory framework that has been in place for this segment of the market since the 2000s, as well as the databases that are currently available. Because banks use real estate as collateral when approving housing loans, residential real estate is a crucial element of financial stability. A database for real estate market that contains information on both residential as well as commercial properties is kept up to date by the National Bank of Serbia (hereinafter: NBS). These figures are based on first-time real estate valuations and do not include cash purchases. The National Mortgage Insurance Corporation (hereinafter: NMIC) maintains a database of residential real estate purchases financed by mortgages from banks that have signed contracts with this corporation. The building, the certain portion of the building and the parcel, are all listed in the Republic Geodetic Authority's real estate database. In the final section of this paper, based on the analysis of various variables, we will determine whether there is a price bubble in residential the real estate in Serbia's market. The price bubble is examined by analyzing the trajectory in the long run of the housing credit share to GDP by using a Hodrick-Prescott one-sided filter with the parameter set to 400,000 and correlation and regression analysis.

The following is the order in which the paper is organized: Part one of the paper will be a review of the literature, followed by a discussion of the legal framework and an examination of numerous Serbian residential real estate statistics. The fourth section of the paper investigates whether this market segment is experiencing a price bubble, and the final section outlines all of the main points of the paper.

# 1. Literature preview

Because residential property is used as collateral when granting mortgage loans, a significant variation in its value can contribute to a reduction in the quality of banks' loan portfolios. As was the case during the global economic downturn of 2007–2008, this would put financial stability in danger and increase the likelihood that volatility would spread to the real estate market (Olszewski, 2012). The majority of these housing loans are foreign currency and currency-indexed loans with lower interest rates than domestic currency housing loans, which are common in most Eastern European countries (Vilenica et al., 2021). Adequate macroprudential policy measures must be implemented to prevent potential risks from the residential real estate market from materializing and to avoid pro-

cyclical effects (Lagarde, 2021). Debt service-to-income (DSTI), loan-to-value (LTV), countercyclical capital buffer (CCyB), debt-to-income caps (DTI), loan-to-income caps (LTI), and many other macroprudential instruments are important for limiting real estate market risk (Carrasco-Gallego, 2020). To be effective, these instruments must be used in a timely manner, taking into account the early warning model (Ciocchetta et al., 2016). The International Monetary Fund has developed core and encouraged sets of soundness indicators with the goal of preserving financial stability. Encouraged sets include real estate market indicators such as real estate prices, residential real estate loans to total loans, and commercial real estate loans to total loans (Houben et al., 2004). According to Heath (2005), financial soundness indicators are indicators of the current financial health and stability of the country's financial institutions, as well as their corporate and household counterparts.

In addition to its importance and impact on financial stability, the residential real estate market has implications for economic growth because the construction sector contributes significantly to GDP growth. To determine that contribution, the residential real estate market must be properly evaluated. In an examination of the method used by hotel companies in the Republics of Serbia and Croatia to measure property, plant, and equipment, Milašinović, Obradović and Krapavlović (2022) came to the conclusion that these companies favor the cost model over the revaluation model. According to Nikolaos et al. (2011), it is necessary to include not only economic and production factors in the analysis, but also various qualitative characteristics of the natural and human environment, such as air pollution (which is a significant problem in larger cities), noise, and natural disasters (floods, fires). Furthermore, population transitions affect the value of residential real estate, which are influenced by social and cultural differences between countries (Stanojević & Tomašević, 2021). Momentum data on housing can be used to better assess the future value of collateral for mortgage lenders (Beracha & Skiba, 2011), but also buyer purchasing power, which is related to real estate characteristics (Mironiuc et al., 2021).

In the consideration and analysis of that sector of the market, the possibility of a price bubble in the market for residential real estate must be taken into account. Any burst of that bubble will undoubtedly cause instability and long-term consequences in the financial and real estate sectors. As a result, the challenge is to detect the price bubble early and minimize its negative consequences (Malović et al., 2021). Various models, such as Growth at Risk (GaR), which is based on the assessment of financial conditions and the cyclical dimension of systemic risk (O'Brien & Wosser, 2021), are used to detect the price bubble early and prevent its impact on financial stability in a timely manner. This methodology allows us to understand how financial conditions and financial vulnerability may contribute to future periods of weak economic growth. Ribeiro et al. (2017) use a fuzzy cognitive map (FCM) developed to identify determinants of investment risk in the market for residential real estate in their risk assessment analysis, which contributes to reducing the number of criteria omitted in decision making and provides a better understanding of risk determinants. The next section of the paper is based on a presentation of the legal framework of Serbia's residential real estate market.

# 2. Legal framework

In order to establish a modern institutional framework consisting of fiscal policy and incentive measures of the government and other state bodies, an efficient market environment must be created. Such an environment should help to accelerate transaction procedures, allowing Serbia to develop a reliable real estate management system (Vasovic, Gospavic, and Cirovic, 2012). The legal framework after the 2000s will be the focus of this analysis.

The Mortgage Law was passed in 2005, and amendments were made to it in 2015. With the passage of this law, it became possible to establish a lien on real estate and thus approve mortgage loans (Mortgage Law, p. 1). As a result, commercial banks were given the opportunity to establish a mortgage on real estate, and mortgage loan placement reduced the amount of cash on the real estate market. In 2011, the NBS adopted a decision for keeping and enhancing financial system stability. In order to encourage long-term dinar lending, this decision "created an 80% LTV (loan-to-value) cap for mortgage loans. This cap applies solely to loans denominated in foreign currencies and loans with foreign currency indexes; dinar loans are exempt from its applicability. In addition, this ruling restricts the indexation of loans to the euro alone. The NBS implemented this measure, which allows banks to approve loans to natural persons that are indexed to a foreign currency, as long as the currency of indexation is the euro. The purpose of this strategy was to reduce the systemic foreign exchange risk brought on by the usage of currencies other than the euro. The third element of this decision is the establishment of a 30% down payment requirement for all foreign currency loans that are not secured by mortgages or credit cards. All dinar loans are exempt from this requirement" (Decision on measures for safeguarding and strengthening financial system stability, p. 1-2).

On a regular basis, banks are required to evaluate the real estate market value used to secure the bank's receivables in order to manage the credit risk effectively and efficiently. The banks are required to "monitor the value of real estate property on a regular basis and, except in the case of mortgaged residential real estate property where the amount of outstanding bank exposure does not exceed 40% of its value less the sum of all higher priority claims over such property, to determine the market value of such property at least once every three years, or more frequently if significant changes in property market conditions occur" (Decision on the Classification of Bank Balance Sheet Assets and Off-Balance Sheet Items, p. 14). The current year's property tax decision, which is regarded as a document providing an evaluation of the valuation of a specific piece of real estate on which the mortgage is secured, satisfies the requirement of the decision as well.

The Law on Legalization was passed in 2015 in order to bring all illegally constructed buildings into the legal flow because legalization of buildings is in the public interest of Serbia (Law on Legalization, p. 1). Legalization contributes to the increase of public revenues at the state level through the collection of legalization fees, the increase of public revenues in local self-government units through the collection of legalization fees and the collection of property taxes, the creation of conditions for spatial planning and rational use of construction land, the ability of owners of buildings to register in the real

estate cadaster, which contributes to further regulation of the residential real estate market through better determination real estate market value and the possibility of mortgaging the building if necessary to the owner. According to data from the Ministry of Construction, Traffic, and Infrastructure, there were over two million illegally built facilities in Serbia as of November 19, 2022, with nearly a million of them related to residential real estate.

# 3. Residential real estate database in Serbia

Accurate and trustworthy databases are needed to analyze the residential property market. Residential real estate data in Serbia are held by the NBS, the NMIC, and the Republic Geodetic Authority.

In January 2014, the NBS launched the Real Estate Valuations Database project, which includes data on real estate valuations used as collateral in loan approval. This database contains appraisal values provided by certified valuers for mortgage loans, not transaction values stated in contracts, implying that it does not include cash-financed real estate. The NBS adopted a decision in November 2015 requiring banking institutions to send pricing data to the NBS on a monthly basis (Decision on Submission of Valuation Data on Mortgaged Real Estate and Loans Secured by Mortgage, p. 1). In order to improve real estate appraisal, the NBS created a mortgage valuation database according to the data gathered. The Real Estate Valuers Law was passed at the end of December 2016 (Real Estate Valuers Law, p. 1). In accordance with this law and decision ("Decision on the Content, Deadlines, and Manner of Submission of Data on the Valuation of Mortgaged Real Estate and Loans Secured by Mortgage", p. 2) adopted in 2017, the NBS granted licensed appraisers access to the NBS Real Estate Valuations Database (hereinafter: the Database). The Database includes residential and commercial real estate valuations (National Bank of Serbia, Access to the Real Estate Database).

	Average estimated value per EUR/m <sup>2</sup> in 2021	Average estimated value per EUR/m <sup>2</sup> in 2020	Number of estimated real estate in 2021
Serbia	1,067	973	12,524
Belgrade	1,611	1,430	5,388
Vojvodina	751	729	3,719
Sumadija and Western Serbia	692	653	2,199
Southern and Eastern Serbia	690	671	1,218

Table 1: Estimated residential real estate values in 2021

Source: National Bank of Serbia

"Banks are required to submit data on real estate appraisals no later than the 20<sup>th</sup> of the current month for newly approved loans on the basis of which funds were disbursed in the previous month" ("Decision on the Content, Deadlines, and Manner of Submission of

Data on the Valuation of Mortgaged Real Estate and Loans Secured by Mortgage", p. 1). A full set of all appraisals takes more than a quarter because they can be conducted more than a month before loan release. The NBS will provide valuation of real estate data from the database upon request from banks and qualified valuers. According to Ministry of Finance data, there are 251 licensed appraisers and three accredited associations in Serbia as of November 20, 2022 (Ministry of Finance).

According to Table 1, the average estimated value in the Belgrade region in 2021 is 1,611 EUR, which is more than double the average appraised value per m² in other regions of the Republic of Serbia (Vojvodina (751 EUR), Šumadija and Western Serbia (692 EUR), and Southern and Eastern Serbia (690 EUR). Belgrade has the most appraised real estate (5,388), while Southern and Eastern Serbia have the least (1,218). Given the total number of entered estimates (12,524), it is reasonable to conclude that the average value of the estimate of 1,067 EUR for the Republic of Serbia is predetermined in major part by the fact that 43% of the entered estimates for 2021 refer to the Belgrade, which has the highest average price per m².

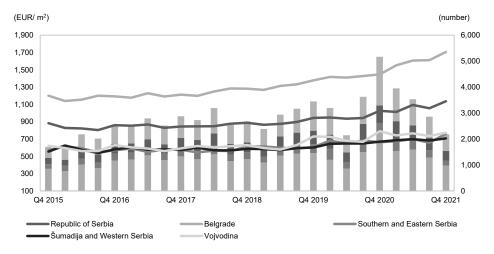


Chart 1: Estimated values of real estate and the number in each region

Source: National Bank of Serbia

Data from the Database are a good starting point for analyzing the factors that influence the movement of the average estimated value in the market for real estate. According to the dynamics of the average estimated value of real estate per m<sup>2</sup> from Q4 2015 to Q4 2021, there is a 7.7% QoQ increase in real estate value in Q4 2021 at the Serbian level (5.9% QoQ in the Belgrade, 5.3% QoQ in the Vojvodina region, 3.7% QoQ in

Šumadija and Western Serbia, and 15.8% in Southern and Eastern Serbia). The average estimated real estate value decreased in Q2 2020, while the total number of estimates rose because of the pandemic, according to Chart 2. Such changes in the real estate industry are consistent with changes in both this market segment and other states.

(value of index) (number)

130

120

110

100

90

2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

Total trading volume in Serbia (rhs)
The DOMex index for Serbia (lhs)
The DOMex index for Belgrade (lhs)

Chart 2: The DOMex index and total trading volume in Serbia

Source: National Mortgage Insurance Corporation

Data from the NMIC include only real estate that is insured with this corporation and whose purchase is financed by mortgage loans from banks that have signed contracts with this corporation, so the presented real estate price movements cover a smaller portion of total turnover and do not necessarily reflect developments in the overall real estate market. As a result, this database does not include data on realized prices for properties financed with funds or unsecured debt. The insured residential property price in average at the Republic of Serbia level in Q4 2021 was 1,019 EUR/m² (in the same period in 2020, the price was 866 EUR/m²). In Belgrade, the average price of insured residential property in Q4 2021 was 1,443 EUR/m² (it was 1,212 EUR/m² in the same period in 2020). DOMex was founded in order to provide the public with more transparent information about the residential real estate market. The DOMex for that period (which can be a month, quarter, or year) is determined by comparing the mean of all prices per square meter realized in that period in the specified territory to the average value of all prices per m² realized in the base period in the specified territory (National Mortgage Insurance Corporation, *DOMex*). (Chart 2)

The real estate cadaster, according to Article 2 of the Law on the Registration Procedure with the Cadaster of Real Estate and Utilities, is a basic and public register that contains spatial and descriptive data on real estate, data on its propriety interests, and other rights and facts whose registration in the cadaster is required by law (Law on the Registration Procedure with the Cadaster of Real Estate and Utilities, p. 2). The Republic Geodetic Authority registers real estate by recording data on the parcel, the building, and a special part of the building. According to Article 4 of the Law on State Survey and Cadaster, real estate includes land, above ground and underground construction facilities, and special parts of buildings (Law on State Survey and Cadaster, p. 3). According to contracts recorded with the Republic Geodetic Authority, the total amount of money invested in Serbian real estate in the first half of 2022 was 3.6 billion euros, which is 25% more than the amount invested in the same period of 2021. The real estate market in Belgrade had the greatest portion of funds (52%), followed by Vojvodina (27%). The median price of a residence in an old building in the Republic of Serbia was 1,260 EUR/m<sup>2</sup> in the first half of 2022, up 19% from comparable time frame from the preceding year, while the average price of an apartment in a new building was 1,617 EUR/m<sup>2</sup>, up 11% from the same period the previous year. The areas with the highest prices for apartments in old buildings in the first half of 2022 are Stari Grad, Vračar, Savski Venac, and Novi Beograd (Report on the situation of the market real estate for H1 2022, p. 2 and 25) - (Table 2).

Table 2: Statistical parameters of apartment prices in H1 2022

	Ole	New building				
Municipality	Av erage v alue (EUR/m²)	Minimum	Maximum	Av erage	Minimum	Maximum
		v alue				
		(EUR/m <sup>2</sup> )				
Stari Grad	2,488	833	4,902	3,078	1,010	4,047
Vračar	2,345	850	3,953	2,353	1,250	4,780
Sav ski Venac	2,142	833	3,500	2,497	875	3,982
Novi Beograd	1,980	693	3,857	2,458	875	3,982
Zv ezdara	1,877	600	3,125	1,972	625	3,298
Palilula	1,752	765	3,300	2,507	1,087	3,585
Zemun	1,752	750	2,887	1,900	705	3,063
Voždov ac	1,667	635	3,000	2,065	737	3,022
Čukarica	1,570	610	2,620	1,695	682	2,970
Stara Rakovica	1,342	780	2,000	1,655	875	2,090

Source: Republic Geodetic Authority

## 4. Is there a price bubble?

To answer the question of whether the residential real estate market in the Republic of Serbia is currently experiencing a price bubble, it is necessary to first define what a price bubble is. The most basic definition of price bubble in real estate market is a rise in real

estate prices, often significantly above their fundamental values, due to the expectation of high future returns. After a period of time, investors estimate that yields have fallen below expectations, resulting in a large-scale real estate sales, a significant drop in price, and the bursting of the price bubble.

(in %)

(in percentage point)

12

10

8

6

4

2

1

0

A

1

0

A

Gap (rhs)

Ratio of housing loans to GDP (lhs)

Long-term trend (lhs)

Chart 3: Ratio of housing loans to GDP and long-term trend

Source: the author's calculation.

To show that there is a price bubble in the residential real estate market, we need to look at which levels of turnover are financed by loans and which by cash. Furthermore, it must be determined whether credit activity in the form of housing lending is sustainable. According to Republic Geodetic Authority data, 28% of all apartments were purchased with loans in the first half of 2022 (36% in the first half of 2021), indicating that the majority of apartments (72% in the first half of 2022) were purchased with cash (Report on the situation of the market real estate for H1 2022, p. 17). When the proportion of credit activity in gross domestic product exceeds its long-term trend by at least 2 percentage points, excessive credit growth is present. In order to evaluate whether excessive credit growth is the outcome of housing lending, we will look at the share of housing loans in GDP by examining the trend in the long run. For this calculation we will use Hodrick-Prescott one-sided filter with the value of the parameter 400,000. In Q3 2022, the housing credit-to-GDP ratio deviated by 1.3 percentage points from its long term trend, which was less than benchmark of the 2 percentage point. Based on the foregoing, one can conclude that housing lending in Serbia is sustainable and does not jeopardize financial stability (Chart 3).

We will use multiple regression analysis variables that represent the ratio of regression coefficients to independent variables to evaluate the relationship between the selected independent variables and the price of residential real estate in Serbia. To identify the variables that are statistically significant in affecting the estimated worth of residential property in Serbia, as well as their contribution to the future residential real estate price movement, multiple regression analysis is utilized. We investigated the relationship between selected macroeconomic factors (Serbia DOMex-SD, average gross earnings-AGE, unemployment rate-UR, interest rates on housing loans-IR, number of building permits issued in new construction-BP, and headline inflation-HI) and the mean assessed residential real estate value in euros per m² in Serbia. The dependent variable is the mean assessed residential real estate value in Serbia (RS) in euros per m², as determined by data from the NBS's Real Estate Database. The data used in the analysis ranged from the fourth quarter of 2015 to the fourth quarter of 2021, and quarterly data were used in the analysis. The Statistical Office of the Republic of Serbia provides data on average gross earnings, the unemployment rate, and the number of building permits issued for new construction (Statistical Office of the Republic of Serbia); interest rates on housing loans are derived from the NBS statistics; and Serbia DOMex is derived from the NMIC. We will use multiple linear correlation to determine the degree of correlation between the variables (Table 3).

Table 3: Correlation between variables

Indicators	RS	SD	AGE	UR	IR	BP	НІ
RS	1						
SD	0.666	1					
AGE	0.951	0.543	1				
UR	-0.605	-0.129	-0.665	1			
IR	-0.636	-0.371	-0.668	0.827	1		
BP	0.741	0.376	0.744	-0.798	-0.825	1	
Н	0.554	0.709	0.479	-0.256	-0.358	0.468	1

Source: the author's calculation.

According to the data in Table 3, the strongest positive correlation exists between the mean assessed residential real estate value in Serbia and the average gross salary (0.951), while the strongest negative correlation exists between the mean assessed residential real estate value in Serbia and housing loans interest rates (-0.636). The above findings are consistent with economic expectations because an increase in the average gross salary increases purchasing power and the potential rise in residential property prices, whereas a surge in the interest rate on housing loans has the opposite effect. This conclusion is consistent with previously reported findings from other pertinent study in this area (Bansal, Narang, Sachdeva, Kashyap, & Panda, 2021), which revealed a significant relationship between changes in real estate prices and salaries. Serbia DOMex is statistically significant and influences the movement of the mean assessed residential real estate value per square meter in Serbia, according to regression statistics (Table 4). The mean assessed residential real estate value in Serbia increased by 3.9 euros per square meter as a result of the increase in Serbia's DOMex. This result is consistent with the research

done by Spasenić, Benković and Dmitrović (2019). The coefficient of determination (0.94) is quite high, indicating that the model has a high level of explanatory power.

Table 4: Regression Statistics

Regression Statistics				
Multiple R	0.971647756			
R Square	0.944099362			
Adjusted R Square	0.925465816			
Standard Error	24.47555626			
Observations	25			

	Coefficients	Standard Error	t Stat	P-value
RS	-121.8934662	179.60154	-0.6786883	0.5059684
SD*	3.879866145	1.4523851	2.6713756	0.0155687
AGE	0.006476493	0.0008533	7.5898613	5.143E-07
UR	-1.959098025	3.7759146	-0.5188407	0.6101921
IR	36.02409943	32.458421	1.1098537	0.2816697
BP	0.022124159	0.0173244	1.2770493	0.2178133
HI	-2.311864518	5.4685021	-0.4227601	0.6774777

<sup>\*</sup> Connection between variables is statistically significant (p<0.05)

Source: the author's calculation.

The NBS carefully supervises residential property market developments and considers the implications for financial stability. If it is determined that certain developments may jeopardize stability of the financial system, the NBS has various instruments (such as debt service-to-income, loan-to-value ratio, and countercyclical capital buffer) at its disposal, as well as the option of introducing new measures to limit the accumulation of potential risks in this market segment.

# Conclusion

The residential real estate market is a fundamental source of well-being for the national economy, as well as a leading indicator of economic and social strength and financial stability. The residential real estate market's critical role in business and financial cycles necessitates regular monitoring and assessment of the impact on monetary policy and financial stability. This is especially significant given that this market has the potential to be a source of instability with serious and long-term consequences for economic and financial

development. Because this market has significant macroeconomic implications for the Serbian economy, an examination of its current state is critical.

When banks approve housing loans, they use residential real estate as collateral. The change in the value of real estate used as collateral for loans has a significant impact on the loan portfolio quality of banks. If their value is not properly assessed, financial system instability may occur, which is why the 2007–2008 global financial crisis was erased. The unpredictability of the financial market can therefore be extended to the real estate market. To avoid this, the movements of the residential real estate market have to be examined carefully. To accomplish this, a reliable and accurate database of all the properties' characteristics (square footage, number of floors, heating method, date, method, and currency of assessment, and so on) is required.

In Serbia, there are currently three databases available for analyzing the residential real estate market. The NBS maintains a database on residential and commercial real estate, which contains information on the initial estimates of these properties. This database does not include information on cash purchases of real estate. The following database is housed within the NMIC and contains information on residential real estate purchases financed by mortgage loans from banks that have signed contracts with this corporation. The Republic Geodetic Authority owns the most comprehensive database, which contains information on the cadastral plot, the building, and a specific part of the building.

A price bubble in that market sector must be explored in order to ascertain whether changes in the market for residential properties can have an impact on stability of the financial system. A price bubble is a rapid increase in real estate prices, often far in excess of their fundamental value, caused by expectations of high future returns. In order to determine the sustainability of housing credit, we looked at the trajectory in the long run of the housing loans share of GDP by using a Hodrick-Prescott one-sided filter with a parameter value of 400,000. In Q3 2022, the share of housing loans in GDP deviated from its trend in the long run by 1.3 percentage points, which was less than the benchmark of 2 percentage points. This suggests that housing lending in Serbia is sustainable and does not threaten financial stability at the moment. Furthermore, the majority of apartments are paid for in cash rather than with loans, according to the Republic Geodetic Authority's database. This suggests that, despite rising residential real estate prices in Serbia, there is no price bubble in that segment of the market at the moment.

The consequences of the worldwide economic downturn of 2007-2008 necessitate constant caution in assessing the value of residential real estate in order to avoid a financial market collapse. Adequate and timely measures by the NBS helped to ensure that price and financial stability were not jeopardized even during the Corona virus pandemic. The NBS has a number of current measures as well as the option of introducing new measures that can impact the limits of the accumulation of possible threats in this market segment if it is believed that certain developments could endanger financial sustainability. All of this necessitates closer monitoring of developments in the residential real estate market as well as all other variables affecting this market segment.

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